coupling the lateral-flow chromatographic assay cassette to a sample holder configured to angle the lateral-flow chromatographic assay cassette in relation to a cassette reader that includes:

an illumination light source, a detector device, means for transmitting an illuminating light from the illumination source to the lateral-flow chromatographic assay cassette, means for transmitting a signal from the lateral-flow chromatographic assay cassette to the detector device, and an adjustable variable angle stage configured for adjusting an angle of the lateral-flow chromatographic assay cassette in relation to an illuminating light source and a detector device;

adjusting the angle of the lateral-flow chromatographic assay cassette in relation to the illuminating light and the and the detector device using the adjustable variable angle stage so as to optimize an elastic light scattering signal from the lateral-flow chromatographic assay cassette; and

observing the presence of the analyte of interest by elastic light scattering.

15. The method of claim **14**, wherein the angle is approximately 45°.

16. The method of claim **14**, wherein the sample holder is configured to sample one or more angles to optimize elastic light scattering.

17. The method of claim **14**, wherein the sample holder is configured to allow adjustment the angle of the lateral-flow chromatographic assay cassette relative to the light source and the detector device.

18. The method of claim **14**, further comprising adjusting the angle of the lateral-flow chromatographic assay cassette relative to the light source and the detector device to improve at least one of the signal-to-noise ratio or the detection limit for the analyte of interest.

19. The method of claim **14**, wherein the signal readout is at least one of qualitative, semi-quantitative, or quantitative.

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